Name: _____ Date: _____ IB Math A&A SL

Lesson 3.7 - Solving Exponential Equations

I. Solving Exponential Equations

Solve for x. Discern situations when you need or don't need a calculator.

1. $9^x = 27^{2-x}$

3. $3^{6-x} + 13 = 40$

2. $e^{2x} - 3e^x + 2 = 0$

4. $\frac{8}{5^{x+2}} = \frac{1}{2^{x-2}}$

II. Practice

1. $32^x - 1 = -\frac{7}{8}$

2. $8^{2x-1} = 16^{1-x}$

3. $\frac{400}{1+e^{-x}} = 350$

4. $4^{x+3} = 7^x$

5. $e^{2x} - e^x - 6 = 0$

6. $9^x - 3^{x+1} - 10 = 0$

7. The function $f(x) = A \cdot B^{3x}$ crosses through the points (0.5,1.5) and (1,13.5). Find the values of A and B,